The Status of Year 2000 Readiness in Public Elementary and Secondary School Districts

Fall 1999

U.S Department of Education

November 8, 1999

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Prepared for:
Office of Chief Information Officer and
U.S. Department of Education

Prepared Under:
Contract Number EA94052001
Office of the Under Secretary
Planning and Evaluation Service
U.S. Department of Education

November 8,1999

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Executive Summary

As the new millennium approaches, the nation has grown increasingly concerned about the Year 2000 (commonly referred to as Y2K) Problem or "Millennium Bug." The Y2K Problem not only affects our personal and business computers, it may affect other systems that use embedded software and technologies such as heating systems, elevators, and telecommunications. Systems that have not been brought into Y2K compliance may crash, with widespread system failure, or they may experience minor bugs.

The extent of the Y2K Problem will not be known until the New Year. However, many businesses and public agencies have made Y2K compliance a major priority to ensure a smooth transition into 2000 by allocating the necessary human and financial resources to repair and test their technologies.

In September 1999, the U.S. Department of Education (ED) contracted with Westat to conduct a telephone survey on the Y2K readiness of our nation's public school districts. The September survey was a follow-up to an ED-sponsored survey conducted during the summer. The purpose of the surveys were to determine the degree of Y2K preparedness of districts and to identify areas in need of assistance. Table A provides a snapshot of the fall survey's over all findings.

Key Findings

- In fall of 1999—less than 3 months before the new millennium—64 percent of school districts reported that their mission-critical systems were 100 percent Y2K compliant. Small school districts reported higher rates of compliance (67%) than their mid-size (56%) and larger (52%) counterparts.

- Almost two-thirds (65%) of districts have developed contingency plans for their mission-critical systems. Eighty-three percent of school districts estimated that they would have these plans in place by the end of the year.

- 78 percent of school districts had taken action to ensure that all hardware, software, and embedded technologies had been Y2K-renovated and tested, 14 percentage points greater than those reporting that their mission-critical systems were 100 percent compliant.

- Slightly over one-half of school districts reported testing exchange systems with their major trading partners in the fall survey.

- Overall, districts had made significantly more progress in completing Y2K repairs on their central administration (73%) and student services (72%) than they had on their infrastructure (56%). While 96 percent of districts estimated that they would complete work on their administration and student services systems, only 86 percent estimated that they would be able to complete the infrastructural renovations.

TABLE A
YEAR 2000 SURVEY OF ELEMENTARY/SECONDARY EDUCATION

	Summer Survey	Fall Survey	Progress
Status of **Mission-Critical Systems**			
All Mission-Critical Systems Currently Y2K Compliant	28%	64%	36
Mission-Critical Systems Y2K Compliant By October 1	72%	68%	***-4***
Mission-Critical Systems Y2K Compliant By November 1	85%	79%	***-6***
Mission-Critical Systems Y2K Compliant By December 1	90%	90%	0
Mission-Critical Systems Y2K Compliant By January 1	98%	96%	***-2***
Action Taken To Ensure **Hardware, Software, and Embedded Technologies** Are Y2K Compliant			
	76%	78%	2
Y2K Testing (Will Be) Has Been Conducted w/**Trading Partners**			
	(57%)	53%	---
Status of **Contingency Plans** for Mission-Critical Systems			
Contingency Plans Have Been Completed	55%	65%	10
Contingency Plans Completed by October 1 (All Systems)	(63%)	65%	---
Contingency Plans Completed by November 1 (All Systems)	(77%)	71%	---
Contingency Plans Completed by December 1 (All Systems)	(85%)	77%	---
Contingency Plans Completed by January 1 (All Systems)	(97%)	83%	---
			Fall Survey
Status of **Central Administrative Systems** (e.g., accounting, finance, payroll, etc.)			
All Central Administrative Systems Currently Y2K Compliant			73%
Central Administrative Systems Y2K Compliant By October 1			76%
Central Administrative Systems Y2K Compliant By November 1			83%
Central Administrative Systems Y2K Compliant By December 1			91%
Central Administrative Systems Y2K Compliant By January 1			96%
Status of **Student Services** (e.g., student records, bus schedules, food services, etc.)			
All Student Services Currently Y2K Compliant			72%
Student Services Y2K Compliant By October 1			73%
Student Services Y2K Compliant By November 1			81%
Student Services Y2K Compliant By December 1			90%
Student Services Y2K Compliant By January 1			96%
Status of **Infrastructure** (e.g., heating/AC, building, security, telecommunications, etc.)			
All Infrastructure Components Currently Y2K Compliant			56%
Infrastructure Components Y2K Compliant By October 1			57%
Infrastructure Components Y2K Compliant By November 1			66%
Infrastructure Components Y2K Compliant By December 1			78%
Infrastructure Components Y2K Compliant By January 1			86%

Introduction

As the new millennium approaches, the nation has grown increasingly concerned about the Year 2000 (commonly referred to as Y2K) Problem or "Millennium Bug." The problem stems from early decisions made by computer programmers to code only the last two digits of a year (for example, 99 instead of 1999) to save storage space. On January 1, 2000, older computers that have not been repaired to read 4-digit dates will read the New Year as 1900. The Y2K Problem not only affects our personal and business computers, it may affect other systems that use embedded software and technologies such as heating systems, elevators, and telecommunications. Systems that have not been brought into Y2K compliance may crash, with widespread system failure, or they may experience minor bugs.

The extent of the Y2K Problem will not be known until the New Year. However, many businesses and public agencies have made Y2K compliance a major priority to ensure a smooth transition into 2000 by allocating the necessary human and financial resources to repair and test their technologies.

In September 1999, the U.S. Department of Education (ED) contracted with Westat to conduct a telephone survey on the Y2K readiness of our nation's public school districts. The purpose of the survey was to determine the degree of Y2K preparedness of districts and to identify areas in need of assistance. Throughout this report, the survey is referred to as the "fall survey."

Westat sampled 1,200 school districts using the National Center of Education Statistics' 1997-98 Common Core of Data as the sampling frame. The survey was conducted from September 2 through October 8, 1999, and closed with an 82 percent response rate. Appendix A presents the methodology used to conduct the survey.

The fall survey was a followup to an ED-sponsored Internet-based survey. The baseline survey was posted on the Internet, and the contractor mailed letters to over 16,000 school districts asking them to complete the questionnaire. Researchers achieved a 28 percent response rate during the survey period that ran from March 26 through June 4, 1999. We refer to the baseline survey as the "summer survey" in this report.

As the researchers of the original survey noted, the voluntary nature of the web-based survey produced a certain degree of response bias.[1] Large school districts were more likely than small districts to respond to the survey; therefore, the results were skewed to reflect the characteristics of the larger school districts. Because of this bias, we have presented limited comparative information between the summer and fall surveys.

The fall survey asked technology coordinators about their district's Y2K compliance in five major areas:

- The status of mission-critical systems;
- The status of contingency plans for mission-critical systems;
- The renovation and testing of hardware, software, and embedded technologies;
- The status of testing with major trading partners; and
- The status of other key technology systems, including those for the central administration, student services, and infrastructure.

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[1] U.S. Department of Education (1999). *Year 2000 Survey of Elementary and Secondary Education*. (Washington, DC: Author).

This report presents the overall findings for each of the topic areas. Analyses are also provided by district size based on student enrollment. Information about the methodology used to conduct the fall survey is provided in Appendix A. Appendix B presents supporting data for selected statistics, including standard errors and estimate ranges. A copy of the survey instrument can be found in Appendix C. A glossary of terms is presented in Appendix D.

Status of Mission-Critical Systems

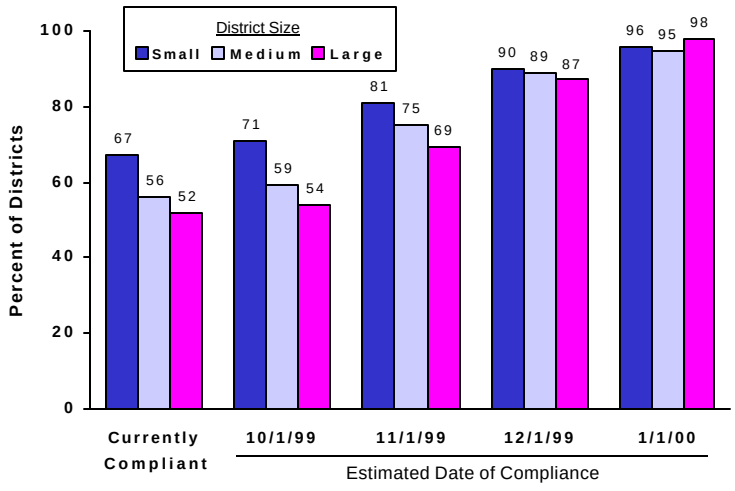
Mission-critical systems are those information systems that are regarded by the school districts as essential to a core business activity or process. Failure of these systems would most likely result in the greatest damage to district technology capabilities and should receive the highest priority in compliance planning and action. In fall of 1999—less than 3 months before the new millennium—**64 percent of school districts reported that their mission-critical systems were 100 percent Y2K compliant.** Small school districts reported higher rates of compliance (67%) than their mid-size (56%) and larger (52%) counterparts.[2] (Figure 1 and Table 1)

Although nearly three-quarters of our nation's school districts are classified as small, large districts garner almost one-half of all students. Therefore, failure of mission-critical systems may adversely affect large numbers of schools and students. At the time the survey was conducted, an estimated 19 million of the nation's 44 million school children were attending schools in districts with Y2K noncompliant mission-critical systems. There are approximately 37,000 schools located in the noncompliant districts.

The good news is that 96 percent of districts overall estimated that they will be 100 percent compliant by January 1, 2000, including 96 percent of small, 95 percent of mid-sized, and 98 percent of large school districts. If districts reach this goal, the number of students in noncompliant districts will fall to about 1 million and the number of schools to approximately 1,180. Districts have made progress since the summer survey when only 28 percent indicated that they were 100 percent Y2K compliant. However, 72 percent believed that they would be compliant by October 1; the fall survey indicated that 68 percent will reach this goal, and progress will be slower in mid-size and larger school districts. (Figure 1 and Tables 1 and 2)

Figure 1

Status of Mission-Critical Systems by District Size



Y2K Elementary and Secondary School District Survey, Fall 1999

[2] For this report, we have used the following enrollment classifications to define districts by size: small—less than 2,500 students enrolled, medium—2,500 to 9,999 students enrolled, and large—10,000 or more students enrolled.

Table 1
Status of Y2K Compliance of **Mission-Critical Systems** in School Districts:
Summer and Fall 1999

Status	Summer	Fall	Change
Percent Currently Y2K Compliant	28%	64%	36
Percent Y2K Compliant by:			
October 1	72%	68%	-4
November 1	85%	79%	-6
December 1	90%	90%	0
January 1	98%	96%	-2

Table 2
Status of Y2K Compliance of **Mission-Critical Systems** in School Districts:
By Size of School District, Fall 1999

	District Enrollment		
Status	<2,500	2,500-9,999	≥10,000
Percent of Districts Currently Y2K Compliant	67%	56%	52%
Percent Y2K Compliant by:			
October 1	71%	59%	54%
November 1	81%	75%	69%
December 1	90%	89%	87%
January 1	96%	95%	98%

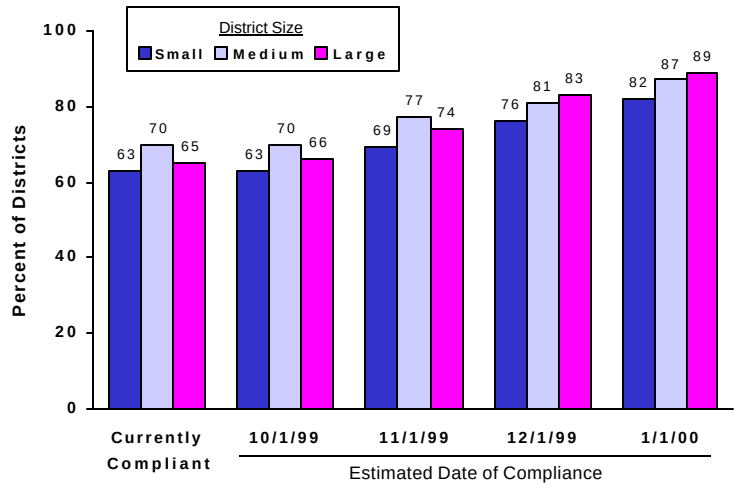
Status of Y2K Contingency Planning

In addition to renovating their technologies for Y2K compliance, districts should have a well-documented plan of action for unforeseen Y2K-related failures of their mission-critical systems. The plan should identify the steps the district would take in order to ensure continuity of operations should they experience the loss of a system, function, or process due to Y2K failure. **Almost two-thirds (65%) of districts have developed contingency plans for their mission-critical systems.** Eighty-three percent of school districts estimated that they would have these plans in place by the end of the year. (Figure 2 and Table 3)

While smaller districts were further along in renovating their mission-critical systems, they lagged behind medium and large districts in developing contingency plans. Sixty-three percent of small districts reported that they had plans in place, compared to 70 percent of medium and 65 percent of large school districts. The gap remains for long-term planning, with only 82 percent of small districts reporting that they will develop contingency plans by January 1 compared to 87 percent and 89 percent of medium and large size districts, respectively.

Figure 2

Status of Y2K Contingency Planning by District Size



Y2K Elementary and Secondary School District Survey, Fall 1999

Table 3
Status of Y2K **Contingency Plans** for **Mission-Critical Systems** in School Districts:
By Size of School District, Fall 1999

	District Enrollment			
Status	All Districts	<2,500	2,500-9,999	≥10,000
Percent of Districts Currently with Plans	65%	63%	70%	65%
Percent with Plans by:				
October 1	65%	63%	70%	66%
November 1	71%	69%	77%	74%
December 1	77%	76%	81%	83%
January 1	83%	82%	87%	89%

Status of Hardware, Software, and Embedded Technologies

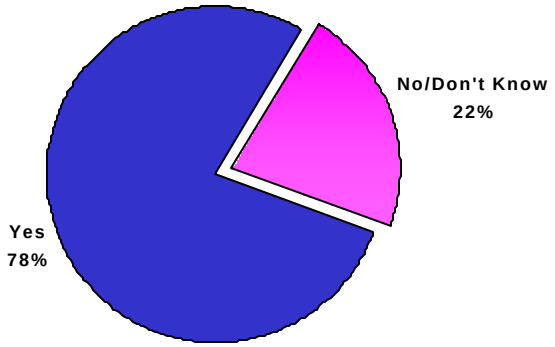
We are living in an age where technology touches nearly everything in our daily lives. The Y2K problem potentially may extend well beyond our computers to the hardware, software, and embedded technologies[3] that operate our most basic machines and equipment. Failure of embedded technologies may cause serious disruptions to learning. For example, a loss of telecommunications, heating and cooling systems, elevators, or security systems (sprinklers and alarms) could cause schools or entire districts to close until they are repaired.

The majority of districts appear to be bringing these systems into Y2K compliance. **By the fall of 1999, 78 percent of school districts had taken action to ensure that all hardware, software, and embedded technologies had been Y2K-renovated and tested, 14 percentage points greater than those reporting that their mission-critical systems were 100 percent compliant.** The rates of district action taken to address these technologies varied little across district size. (Figure 3; Tables 4 and 5)

Progress toward 100 percent compliance may have stalled. The percentage of districts reporting that they had taken action on these technologies was only 2 percent greater than the percentage reported from the summer survey (76% vs. 78%). On a positive note, all but 5 percent of school districts plan to complete their Y2K compliance activities for all hardware, software, and embedded technologies by January 1. (Table 5)

Figure 3

Action Taken To Ensure Hardware, Software, and Embedded Technologies Are Y2K Compliant



Y2K Elementary and Secondary School District Survey, Fall 1999

[3] Embedded technologies are devices such as microprocessors or microcontrollers used to operate or monitor equipment and machinery.

Table 4
Status of Public School District Action Taken To Ensure all **Hardware, Software, and Embedded Technologies** Have Been Y2K-Renovated, Tested, and Implemented: Summer and Fall 1999

Status	Summer	Fall	Change
Percent that have taken action	76%	78%	2
Percent that will take action by:			
October 1	--	79%	--
November 1	--	83%	--
December 1	--	89%	--
January 1	--	95%	--

Table 5
Status of Public School District Action Taken To Ensure all **Hardware, Software, and Embedded Technologies** Have Been Y2K-Renovated, Tested, and Implemented: By Size of School District, Fall 1999

	District Enrollment		
Status	<2,500	2,500-9,999	≥10,000
Percent that have taken action	79%	76%	80%
Percent that will take action by:			
October 1	80%	77%	80%
November 1	83%	82%	83%
December 1	89%	89%	90%
January 1	95%	94%	96%

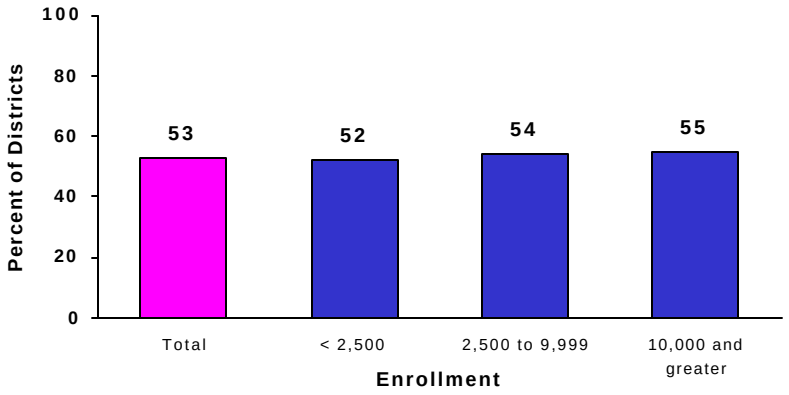
Status of Y2K Testing with Trading Partners

Many school districts conduct business electronically. Payroll, for example, is usually handled electronically between the district and a bank, or many banks if the district offers its employees direct deposit. Districts also exchange information with each other within and across states. Within the Migrant Education Program, for instance, districts often exchange student records electronically with other districts across the nation as students migrate to follow the harvesting. Many states have a centralized student records system that allows districts to send and receive information from the state educational agency. The entities that districts exchange information with are called trading partners.

All districts should test their electronic data exchange operations with major trading partners well before January 1. **Slightly over one-half of school districts reported testing exchange systems with their major trading partners in the fall survey.** The rates by district size varied little, ranging from 52 percent for small districts to 55 percent for large districts. (Figure 4)

Figure 4

Percent of Districts That Have Conducted Y2K Testing with Trading Partners by District Size



Y2K Elementary and Secondary School District Survey, Fall 1999

Status of Y2K Compliance of Key Operational Systems

District technology coordinators were asked about the status of three key operational systems:

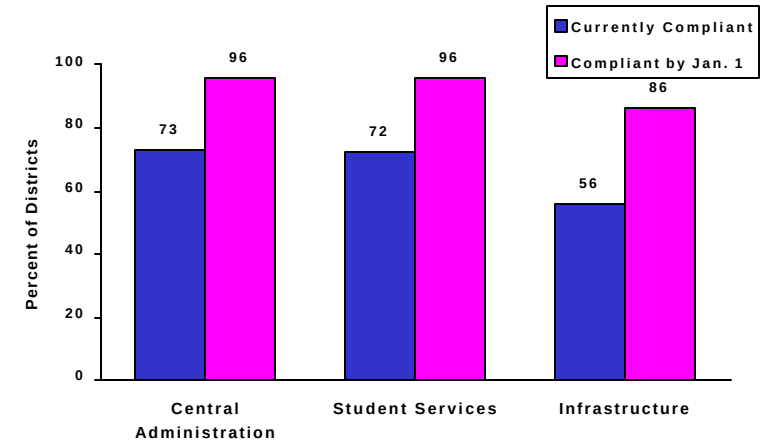
- Central administration systems, such as accounting, finance, and payroll;
- Student services, such as student records, food services, and transportation; and
- Infrastructure systems, such as fire alarms and sprinklers, food services and refrigeration systems, heating and cooling systems, building security, and telecommunications.

Overall, districts had made significantly more progress in completing Y2K repairs on their central administration (73%) and student services (72%) than they had on their infrastructure (56%). While 96 percent of districts estimated that they would complete work on their administration and student services systems, only 86 percent estimated that they would be able to complete the infrastructural renovations. (Figure 5; Tables 6 through 8)

Small school districts had made more progress in completing work on each of the three systems than mid-size and large school districts. For example, almost three-quarters of small districts had completed Y2K repair work on their central administration and student services systems, compared to about two-thirds of medium and large districts. The percentage of districts completing Y2K work on their infrastructure systems ranged from 58 percent for small districts to 47 percent for large districts. (Tables 6 through 8).

Figure 5

Y2K Status of Key Operational Systems



Y2K Elementary and Secondary School District Survey, Fall 1999

Table 6
Status of Y2K Compliance for **Central Administration Systems** in Public Districts:
By Size of School District, Fall 1999

	District Enrollment			
Status	All Districts	<2,500	2,500-9,999	≥10,000
Percent of Districts 100% Compliant	73%	76%	65%	66%
Percent Compliant by:				
October 1	76%	79%	67%	68%
November 1	83%	85%	80%	80%
December 1	91%	92%	89%	89%
January 1	96%	96%	96%	97%

Table 7
Status of Y2K Compliance for **Student Services Systems** in Public Districts:
By Size of School District, Fall 1999

	District Enrollment			
Status	All Districts	<2,500	2,500-9,999	≥10,000
Percent of Districts 100% Compliant	72%	74%	66%	63%
Percent Compliant by:				
October 1	73%	76%	67%	64%
November 1	81%	82%	76%	76%
December 1	90%	91%	86%	88%
January 1	96%	96%	95%	96%

Table 8
Status of Y2K Compliance for **Infrastructure Systems** in Public Districts:
By Size of School District, Fall 1999

	District Enrollment			
Status	All Districts	<2,500	2,500-9,999	≥10,000
Percent of Districts 100% Compliant	56%	58%	51%	47%
Percent Compliant by:				
October 1	57%	59%	53%	48%
November 1	66%	67%	64%	58%
December 1	78%	78%	76%	76%
January 1	86%	87%	85%	87%

Appendix A

Survey Methodology

Westat conducted the *Survey of Y2K Readiness in Public Elementary and Secondary School Districts* in three phases:

- Sampling
- Interviewing and data processing, and
- Sampling weighting and nonresponse adjustment

Sampling

A single-stage stratified design was used to draw a sample of 1,200 public elementary and secondary school districts from the NCES Common Core of Data Public Elementary and Secondary Agency Universe: 1997-98. Districts were stratified by size and 400 were selected independently, with equal probability, from each stratum. Because the strata differed in size, the probability of selection differed by stratum.

The districts were stratified by size based on enrollment:

Large	greater than 10,000;
Medium	2,500 to 9,999;
Small	less than 2,500.

Within each size stratum, the frame was sorted by census region, district type, metropolitan status, and enrollment. The states were grouped into five census regions: Northeast, North Central, South, West, and other jurisdictions, including outlying areas and Department of Defense schools. District types were defined as follows:

1	local district, not a component of a supervisory union;
2	local district, component of a supervisory union;
3	supervisory union administrative center;
4	regional education services agency;
5	state-run institutions;
6	federally run institutions;
7	all other institutions.

Metropolitan status refers to the type of location served by the district:

1	serves primarily a central city in a Metropolitan Statistical Area (MSA);
2	serves MSA, but not primarily a central city;
3	does not serve MSA.

Districts were then selected systematically with a random start from the sorted frame.

Interviewing and Data Processing

Once the sample was drawn, ED mailed letters to district superintendents informing them of the survey. Westat interviewers telephoned the districts asking to speak to the person most knowledgeable about the district's Y2K progress, such as a Y2K coordinator, MIS director, or technology coordinator. Interviewing was conducted from September 2 through October 8, 1999. Westat achieved an 82 percent response rate. The survey data were entered into Westat's COED data processing system and verified for keypunching accuracy.

Sampling Weights and Nonresponse Adjustment

After the sample was selected, a sampling weight was calculated; this is the reciprocal of the selection probability. Next, 120 replicate weights were constructed for estimating sampling variance by the generalized jackknife method. These weights were then adjusted for nonresponse. Because nearly half of the population of large districts was sampled, finite population correction factors were calculated.

The sampled records were sorted in selection order, and within each stratum every 40^{th} record was assigned to a given replicate, creating 40 replicates of 10 records each. Each replicate was then dropped in turn, and the weights of the remaining records in the stratum containing that replicate were adjusted by the factor $n_h/(n_h-1)$, where n_h is the number of replicates in stratum h.

Response status for each sampled district was assigned as follows:

1 eligible respondent (complete interview);
2 eligible nonrespondent (refusal; maximum calls, interview not completed; maximum calls, no contact);
3 ineligible.

The full-sample and replicate weights were then adjusted for nonresponse. A factor of $(S_1+S_2)/S_1$ was used when recalculating respondents' weights, where S_1 is the sum of respondents' weights and S_2 is the sum of nonrespondents' weights. Nonrespondents' weights were then set to zero. Ineligibles were not included in the adjustment; their weights were also set to zero.

Finite population correction factors were calculated for each replicate as follows:

$$f_g = 1 - \frac{n_h}{N_h},$$

where n_h is the number of sampled districts in stratum h, and N_h is the population of districts in stratum h.

Factors required for estimating variance using the generalized jackknife method were calculated for each replicate as follows:

$$h_g = \frac{(n_h - 1)}{n_h},$$

where stratum h contains replicate g.

These factors were applied according to the following formula to calculate variance estimators using Version 4 of WesVar PC:

$$v(\hat{\Theta}) = \sum_{g=1}^{G} f_g h_g \left(\hat{\Theta}_{(g)} - \hat{\Theta} \right)^2 ,$$

where

Θ is the proportion of interest

$\hat{\Theta}$ is the full-sample estimate of the proportion

$\hat{\Theta}_{(g)}$ is the g^{th} replicate estimate of the proportion, based on the records in replicate g

G is the total number of replicates

$v(\hat{\Theta})$ is the estimated variance of the full-sample estimate of the proportion

The unweighted and weighted number of districts surveyed by strata are as follows:

Strata	Number of Unweighted Districts in Sample	Unweighted Number of Districts (Completed Interviews)	Weighted Number of Districts
Large	400	339	808
Medium	400	322	3,125
Small	400	312	10,871
Total	1,200	973	14,804

Note: 11 districts were ineligible to be surveyed.

Variances

The standard error is a measure of the variability of estimates due to sampling. It indicates the variability of a sample estimate that would be obtained from all possible samples of a given design and size. Standard errors are used as a measure of the precision expected from a particular sample. If all possible samples were surveyed under similar conditions, intervals of 1.96 standard errors below and 1.96 standard errors above a particular statistic would include the true confidence interval. For example, 64 percent of districts reported that their mission-critical systems were 100 percent Y2K compliant and the standard error is 1.6 percentage points. The 95 percent confidence interval for the statistic extends from [64 – (1.6 times 1.96)] to [64 – (1.6 times 1.96)], or 60.8 to 67.1 percent (+/- 3.1 percentage points). Standard errors and estimate ranges for selected statistics are provided in Appendix B.

Appendix B

Selected Supporting Tabulations

Elementary and Secondary School Districts – Overall				Small (enrollment <2,500)		
	Estimate	Standard Error	Range of Estimate (+/-)	Estimate	Standard Error	Range of Estimate (+/-)
Q1. All Mission Critical Systems 100% Y2K Compliant	64%	1.6	3.1	67%	2.2	4.2
Q2. Hardware, Software, etc. Testing To Assure Y2K Readiness	78%	1.3	2.5	79%	1.7	3.3
Q3. Y2K Testing with Major Trading Partners	53%	1.4	2.8	52%	1.9	3.7
Q4. Development of Y2K Business Continuity Contingency Plans	65%	1.1	2.1	63%	1.5	2.9
Q5A. Y2K Compliance for Central Administration (e.g., acct/finance) Total	73%	1.2	2.3	76%	1.6	3.0
Q5B. Y2K Compliance for Student Services (e.g., student records) Total	72%	1.3	2.5	74%	1.7	3.4
Q5C. Y2K Compliance for Infrastructure (e.g., building/security) Total	56%	1.0	1.9	58%	1.3	2.5

Medium (enrollment 2,500 - 9,999)				Large (enrollment 10,000 and greater)		
	Estimate	Standard Error	Range of Estimate (+/-)	Estimate	Standard Error	Range of Estimate (+/-)
Q1. All Mission Critical Systems 100% Y2K Compliant	56%	1.0	2.0	52%	0.6	1.1
Q2. Hardware, Software, etc. Testing To Assure Y2K Readiness	76%	0.8	1.5	80%	0.4	0.8
Q3. Y2K Testing with Major Trading Partners	54%	0.9	1.8	55%	0.5	1.0
Q4. Development of Y2K Business Continuity Contingency Plans	70%	0.8	1.5	65%	0.5	1.0
Q5A. Y2K Compliance for Central Administration (e.g., acct/finance) Total	65%	1.0	2.0	66%	0.5	0.9
Q5B. Y2K Compliance for Student Services (e.g., student records) Total	66%	0.9	1.9	63%	62.3	0.8
Q5C. Y2K Compliance for Infrastructure (e.g., building/security) Total	51%	1.0	2.5	47%	0.6	1.1

Appendix C

Survey Instructions and Instrument

Instructions

Please review the instructions and the survey form. Westat, ED's contractor, will call for your survey answers.

ABOUT THIS SURVEY: The U.S. Department of Education is conducting this telephone follow-up survey to determine the Year 2000 (Y2K) readiness of elementary/secondary schools. Your school district was selected at random for this survey. Information obtained from this survey will help the elementary and secondary education community prepare for the new millennium. Please designate the most senior representative who is knowledgeable about your school district's Y2K progress to answer the survey when Westat calls in the next few weeks.

CONFIDENTIALITY STATEMENT: All reports on the data collected from this survey will be in aggregate form to protect your confidentiality. Individual school districts will never be identified. Your response to the survey will NOT affect your school district's eligibility for student loans, grants, or funding. Federal legislation protects you from liability claims related to good-faith information sharing about Y2K.

SURVEY DETAILS: Be prepared to answer all of the questions when Westat telephones you in the next few weeks, between now and October 15th. Results of this survey will be posted on the Department's website by November 1, 1999.

QUESTIONS ABOUT THE SURVEY? If you have questions regarding the survey, please contact Westat at **1-888-925-5829**. Your questions will be answered within two business days. Thank you for participating in this survey.

Office of Management and Budget Approval and Burden Statement

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid Office of Management and Budget (OMB) control number. The valid OMB control number for this information collection is **1800-0010**. Approval expires: **10/15/1999**. The estimated time required to respond to the 5-**question telephone survey** is approximately **20 minutes**. The time required to collect the information necessary to complete the survey is estimated to take 1 hour. Information collection includes the time used to review instructions, search existing data resources, and gather data. The total time required to complete this information collection is estimated to take approximately 1.5 hours. **If you have any comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to:** U.S. Department of Education, Washington, D.C. 20202-4651. **If you have comments or concerns regarding the status of your individual submission of this form, write directly to**: U.S. Department of Education, Year 2000 Team, ATTN: Kent H. Hannaman, 400 Maryland Avenue, S.W., FB6, Room 4W104, Washington, D.C. 20202-4110.

Name of your school district _____

Please check the box of the most appropriate answer. Fill in a month/year as needed.

1. When do you estimate that all of your school district's mission-critical systems will be 100% Y2K-compliant?

   All of my school district's mission-critical systems are now 100% Y2K-compliant. ☐ **Yes** ☐ **No**

   If not now, when? MN/YR: _____/_____

2. Has your school district taken action to assure all of its hardware, software, and embedded technologies have been Y2K-renovated, tested, and implemented? ☐ **Yes** ☐ **No**

   If not, when? MN/YR: _____/_____

3. Has your school district conducted Y2K testing with all of its major trading partners? ☐ **Yes** ☐ **No**

4. Have Y2K business continuity contingency plans been developed for *all* of your school district's mission-critical business processes and their systems? ☐ **Yes** ☐ **No**

   If not, when? MN/YR: _____/_____

5. Please estimate the percent complete on Y2K compliance work for each of the following:

   Central Administration (e.g., accounting/finance, payroll, personnel) ____% completed

   If not 100%, when will it be completed? MN/YR: _____/_____

   Student Services (e.g., student records, food services, bus/transportation) ___% completed

   If not 100%, when will it be completed? MN/YR: _____/_____

   Infrastructure (e.g., building/security, heating/AC, telecommunications) ___% completed

   If not 100%, when will it be completed? MN/YR: _____/_____

Appendix D

Glossary

Data Exchanges—The act of giving or taking any type of information in return for information. For example data exchanges would include any data received from or sent to internal or external sources for academic administrative purposes. Data exchanges can be internal or external to an organization. Bridges, filters and/or interfaces may be involved in the electronic exchange of data.

District Size—The districts were stratified by size based on enrollment:

Large	greater than 10,000;
Medium	2,500 to 9,999;
Small	less than 2,500.

Embedded Technologies—Devices (such as microprocessors and microcontrollers) used to control, monitor assist the operation of equipment, machinery or plant. 'Embedded' reflects the fact that they are an integral phase of the system… Examples of embedded technologies include: chilled and hot water systems, fax machine, kitchen equipment, photocopiers, postage franking machines, pre-printed forms (19__), and telephone system. For more information on examples of embedded technology please refer to the following web site: http://www.nd.edu/~y2k/examples/embedded.html

Hardware—The physical, touchable, material parts of a computer or other system. The term is used to distinguish these fixed parts of a system from the more changeable software or data components which executes, stores, or carries. Computer hardware typically consists chiefly of electronic devices (CPU, memory display) with some electromechancial parts (keyboard, printer, disk drives, tape drives, loudspeakers) for input, output, and storage.

Mission-Critical System—An information system that is essential to a core business activity or process.

Software—Something used or associated with and usually contrasted with hardware: as the entire set programs, procedures, and related documentation associated with a system and especially a computer system.

Trading Partner—One that is united or associated with another or others in a business activity of buying and selling commodities or a sphere of common business interest. Trading partners (such as, suppliers, vendors and business partners) that may need Y2K attention include those who provide essential materials such as fuel, food, and lab, medical, and office equipment, or who maintain and repair critical equipment. Others may include partners who handle institutional funds (banks, investment firms, accountants), work with institution data (information systems contractors, data management vendors, testing services), or team with the institution in teaching. Do not forget organizations that provide grants and significant kinds of operating revenue including government agencies and philanthropic groups.

Written Plan—To set down in writing (draw-up or draft on paper) a program of action.

Year 2000 Compliance—In regard to the Y2K problem, the act or process of correct identification, manipulation, and calculation, including leap years, outside of the 1900-1999 year range. The hardware and software or embedded technology must pass a series of Y2K tests demonstrating the aforementioned capabilities.

Year 2000 Contingency Plan—The formulation and documentation of a program of action that describes in detail the alternative work procedure in the uncertain event of a Y2K-related failure. The plan identifies steps the organization would take in order to respond to the loss of a system/function/process and to ensure the continuity of business operations in the event of a Y2K-induced failure.

Year 2000 Problem—The potential obstacle and its variations that might be encountered in any level of computer hardware and software from microcode to application programs, files, and databases that need to correctly interpret year-date data represented in 2-digit-year format.

The Y2K problem resulted from a common programming practice, begun in the 1960s, to represent dates with six digits instead of eight (010198 vs. 01011998). This short hand saved disk space and thus money. Unfortunately, because the first two digits of the year are omitted, programs assume that each date entry is date in the 20th century. No one imagined that the software programs created then would still be in use in 2000. The problem is exacerbated by the fact that dates are located everywhere in programs, and no one can forecast how an application will respond to dates from other centuries without evaluation and analysis.